

ABSTRACT

5 METHOD FOR REPAIRING COMPONENTS USING ENVIRONMENTAL BOND COATINGS AND RESULTANT REPAIRED COMPONENTS

According to an embodiment of the invention, a repaired component is disclosed. The repaired component comprises an engine run component having a base metal substrate, a portion of the base metal substrate between about 1-3 mils in 10 thickness and an overlying bond coat having been removed to create a remaining base metal substrate of reduced thickness. The repaired component further comprises a lower growth environmental bond coating comprising an alloy having an aluminum content of about 10-60 atomic percent applied to the remaining base metal substrate so that upon subsequent repair of the component, less than about 1-3 mils in thickness 15 of the remaining base metal substrate is removed because of less environmental coating growth into the substrate than the prior bond coat. Advantageously, the repaired component has extended component life and increased repairability.